



FAA-E-2091b
December 22, 1967
SUPERSEDING
FAA-E-2091a, 8/24/66

DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION SPECIFICATION

JACK PANEL, AUDIO

1. SCOPE

1.1 Scope.- This specification covers a 20-circuit jack panel consisting of patch jacks mounted on an insulating strip and wired to terminal strips.

2. APPLICABLE DOCUMENTS

2.1 FAA specifications.- The following FAA specifications, of the issues specified in the invitation for bids or request for proposals, form a part of this specification.

FAA-G-2100/1	Electronic Equipment, General Requirements; Part 1, General Requirements for all Equipments
FAA-D-1272	Instruction Booklets, Electronic Equipment
FAA-R-1030	Packing of Electronic Equipment

(Copies of this specification and other applicable FAA specifications, standards and drawings may be obtained from the Contracting Officer in the Federal Aviation Administration office issuing the invitation for bids or request for proposals. Requests should fully identify material desired, i.e., specification, standard, amendment, and drawing numbers and dates. Requests should cite the invitation for bids, request for proposals, or the contract involved or other use to be made of the requested material.)

3. REQUIREMENTS

3.1 Equipment to be furnished by the contractor.- Each equipment furnished by the contractor shall be complete in accordance with all specification requirements. Instruction booklets shall be furnished in accordance with Specification FAA-D-1272, as specified in the contract schedule.

3.2 General.- The equipment specified herein shall provide for 20, two-wire normal through-circuits. Each circuit shall be provided with a monitor jack, a line jack, and an equipment jack. The jacks shall be mounted on a black phenolic panel, hereafter referred to as a jack strip. The jack strip shall be attached to an aluminum alloy supporting chassis, the back of which is to be drilled to accommodate barrier type terminal strips with feed-through soldering lugs. The physical arrangements and wiring of the assembled components shall be in accordance with Figure 1 hereof and as specified hereinafter.

3.3 Jacks.- All jacks specified shall be adjusted by the contractor for use with type PJ051 plugs.

3.3.1 Monitor jacks.- The monitor jacks shall be MIL type JJ-022 telephone switchboard jacks. Twenty jacks of this type shall be provided.

3.3.2 Line and equipment jacks.- The line and equipment jacks shall be MIL type JJ-042 telephone switchboard jacks. Forty jacks of this type shall be provided.

3.3.3 Jack strip.- The jack strip shall be constructed from black phenolic approximately 5/8 inch thick. Specification L-P-513 Type PBE shall apply.

3.4 Panel mounting brackets.- Two mounting brackets, formed from 8 gauge, 0.128 inch thickness, steel (modifies FAA-G-2100/1), shall be provided as shown on Figure 1 hereof. Each mounting bracket shall be fastened to the jack strip and to the aluminum chassis by appropriately spaced hardware. The complete unit shall be suitable for mounting in a standard 19-inch equipment rack.

3.5 Panel designations

3.5.1 Strip card holders.- Continuous-strip type card holders with clear plastic covers shall be mounted above each row of jacks. Three holders complete with white card strips shall be provided for each panel. Strip card holders shall be designed to permit easy replacement of card strips.

3.5.2 Marking.- The designations MON, LINE and EQPT shall be engraved on the phenolic strip in white filled block letters, 3/16 inch high at the locations shown on Figure 1 hereof (modifies FAA-G-2100/1).

3.6 Chassis.- The chassis supporting the terminal strips shall be of U type construction with open bottom. It shall be formed from 0.063 inch aluminum alloy. Corners shall be seam welded. Top shall have a removable dust cover fastened with sheet metal screws.

3.6.1 Terminal strips.- Terminal strips shall be exposed barrier type, Cinch-Jones 20-140-Y, or equal. Four terminal strips shall be installed.

3.6.2 Terminal strip marking.- Terminals shall be numbered left to right from 1 thru 40, wired to correspond with the front view of the jacks from right to left. The monitor jacks wiring shall terminate on the top strips, and the equipment jacks wiring on the bottom strips. Jack tips shall be wired to the even-numbered terminals. This data shall be included in the instruction booklets.

3.7 Crosstalk.- Crosstalk between circuits shall be not greater than -50 dB at 3000 Hz, when circuits under test are loaded with 600 ohms.

3.8 Front finish.- Panel mounting brackets (3.4) and any portions of the chassis visible from the front shall be finished as specified for front panels in 1-3.8.2 of FAA-G-2100/1.

3.9 Nameplate.- The nameplate furnished in accordance with FAA-G-2100/1 shall be mounted on the right end of the chassis ("SIDE VIEW", Fig. 1). The nameplate title shall be JACK PANEL, AUDIO.

4. QUALITY ASSURANCE PROVISIONS

4.1 General requirements for inspection.- See Section 1-4. of FAA-G-2100/1.

4.2 Design qualification test.- Assuming a single wiring harness design for all equipment on the contract, one complete crosstalk test is required, each circuit to each other circuit. This is the only required design qualification test (modifies FAA-G-2100/1). However, if more than one harness design is employed, the crosstalk test shall be repeated for each design.

4.3 Production tests.- Each circuit shall be tested to prove through continuity and plug-in continuity; line and equipment jacks switching functions; and DC isolation from ground and from each other circuit.

4.4 Type tests.- None required.

5. PREPARATION FOR DELIVERY

5.1 General.- See Specification FAA-R-1030.

5.2 Individual packing.- Where two or more units are packed in a common shipping container, each unit with its accessories shall be packed and marked so that it can be identified and reshipped individually without repacking.

6. NOTES

6.1 Notes.- None.

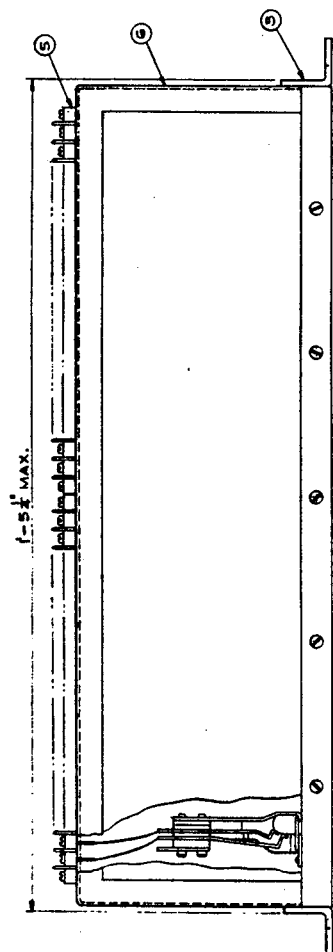
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For Fig. 1, see page 4.

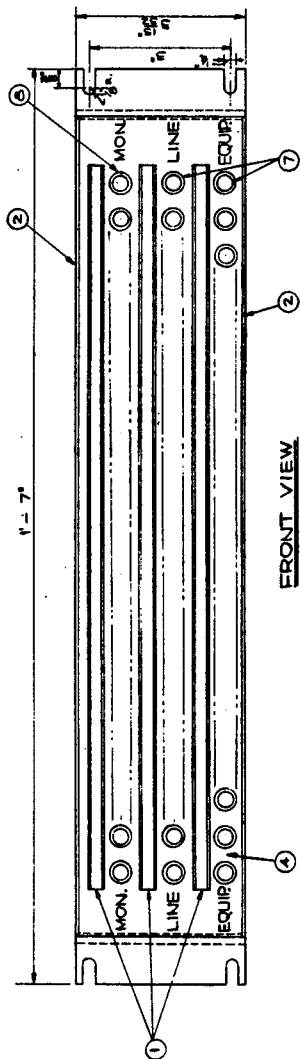
ITEM NO.	EQUIPMENT	NO. REQ'D
1	STRIP CARD HOLDERS WITH CLEAR PLASTIC COVER	3
2	STEEL REINFORCING STRIP	2
3	MOUNTING BRACKETS	2
4	JACK STRIP	1
5	TERMINAL STRIPS	4
6	ALUMINUM CHASSIS	1
7	STANDARD TEL SWITCHBOARD JACK (NORMAL THROUGH)	40
8	STANDARD TEL SWITCHBOARD JACK	20

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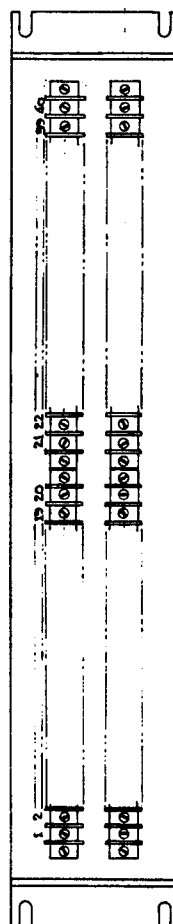
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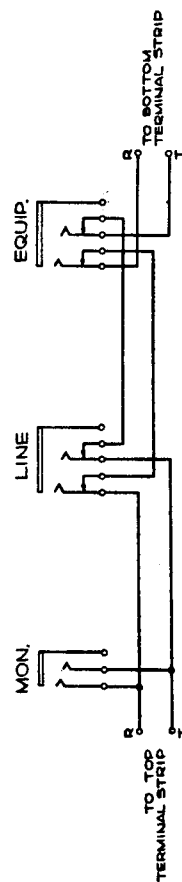
TOP VIEW



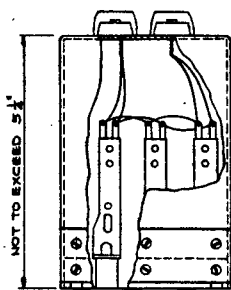
FRONT VIEW



REAR VIEW



WIRING DIAGRAM CIRCUIT, ONE OF TWENTY



SIDE VIEW

FIGURE 1